ABSTRACT

A method of separating, concentrating or purifying uniform carbon nanotubes with desired properties (diameter, chiral vector, etc) in a highly sensitive manner by the use of structure-sensitive properties peculiar to carbon nanotubes; and an apparatus therefor. There is provided a method of separating, concentrating, or purifying carbon nanotubes with the desired properties contained in a sample, comprising the steps pf (a) irradiating a sample containing carbon nanotubes with light; and (b) selecting carbon nanotubes with desired properties. In a preferred embodiment, the light irradiation of the step (a) can be carried out in the presence of a metal so as to cause specified carbon nanotubes to selectively induce a photocatalytic reaction, resulting in metal deposition. Further, in a preferred embodiment, a given magnetic filed can be applied in the steps (b) so as to attain accumulation or concentration or carbon nanotubes with metal deposited.